

# **AcuDis115**

## **User Manual**



**Acura Embedded Systems Inc.**

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## 1.1 Features of AcuDis115

- Solid Aluminum Die-casting chassis
- Variety of LCD panel size selections
- Front bezel IP65
- VGA/DVI input
- 9~36V DC wide range power input

## 1.2 Specifications

<b>Hardware</b>	Display Type	15" 1024 TFT LCD	
<b>Default I/O Port :</b>	1 x VGA	1 x USB for Touch control	1 x 3 pins terminal block power input 9~36V DC
	1 x DVI	1 x Tack switch for VGA / DVI transform	
<b>Option I/O Port :</b>	1 x Line in by phone jack	1 x DB-9 for Resistive Touch control	
On Screen Display Control	On board controller	extendable key pay from connector	TRANSFER BOARD OSD MEMBRANE KEYPAD
<b>LCD</b>			
Max. Resolution	Max. Color	Luminance (cd/m <sup>2</sup> )	Contrast Ratio
1024x768	16.2 M	350	800:1
Viewing Angle (H/V)	Backlight Lifetime	Power Input	
160°/145°	50,000 hrs	9~36V DC on board	
<b>Touch Screen</b>			
Interface	USB / RS-232 auto detect, when both connected USB is primary		
Type	Interface	Light Transmission	
Projected Capacitive	USB interface on tail	Over 90%	
<b>Mechanical</b>			
Construction	Dimensions (WxHxD)	Net Weight	Mounting
Aluminum Die-casting chassis	410x310x55 mm	4.3 kg	Panel / VESA 100x100
<b>Environment</b>			
Operating Temperature	Storage Temperature	Certificate	IP Rating
0 ~ 50 °C (32 ~ 122 °F)	-20 ~ 60 °C (-4 ~ 140 °F)	CE/FCC Class A	Front Panel IP65
Storage Humidity	10 ~ 90% @40°C Non-condensing		

1.3 Dimensions

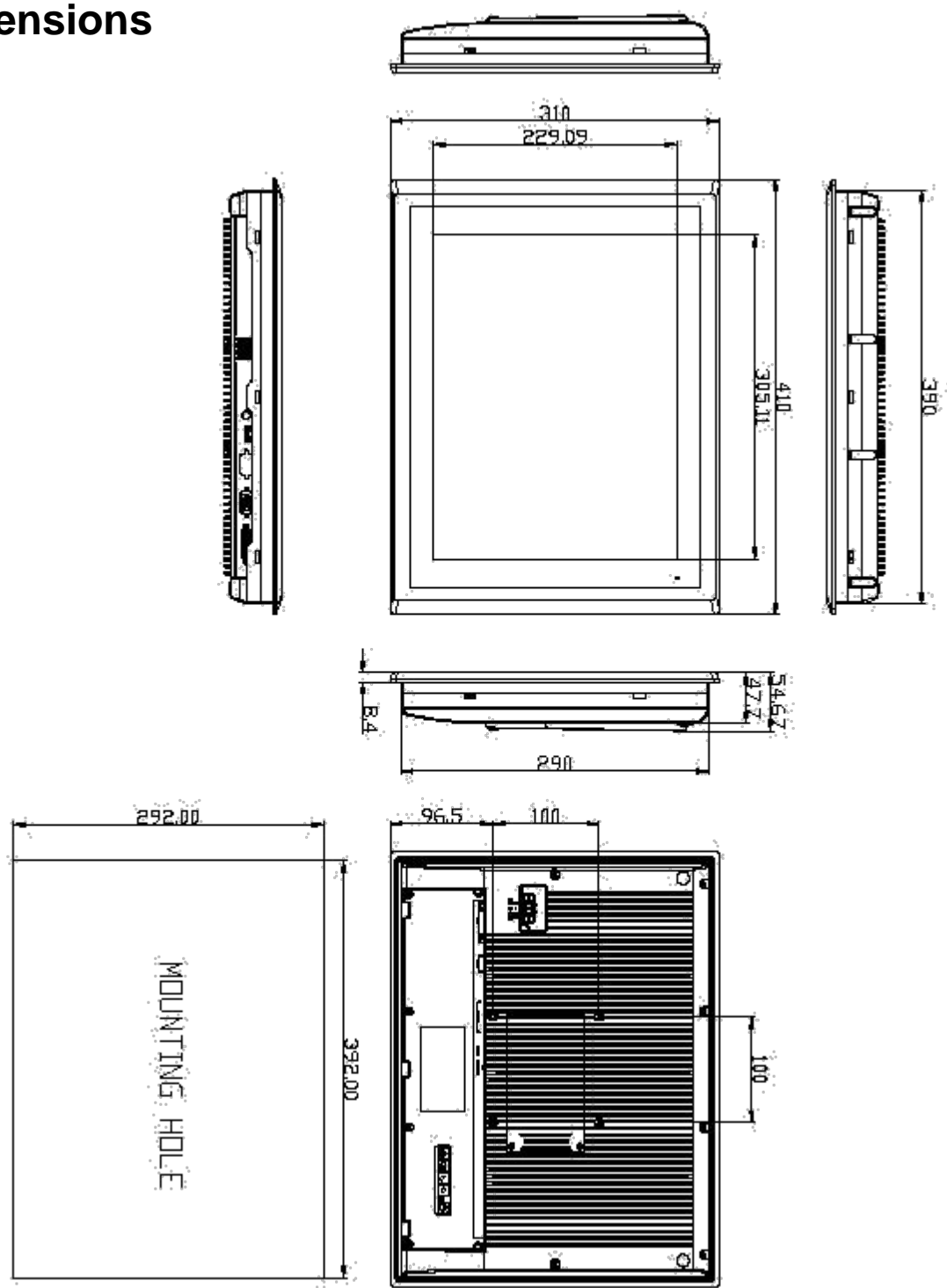


Figure 1.4: Dimensions of AcuDis115

## 1.4 Brief Description

AcuDis115 is a total IP65 aluminum front bezel and chassis LCD Display, which comes with a 15 inch (luminance of 350 cd/m<sup>2</sup>) TFT LCD. AcuDis115 comes with a viewing angle of 160 (H) degrees and 145 (V) degrees. AcuDis115 has more outstanding features, thus giving you the best in monitoring and control applications. AcuDis115 can be VESA-100 mounted .



**Figure 2.2: Front View of AcuDis115**

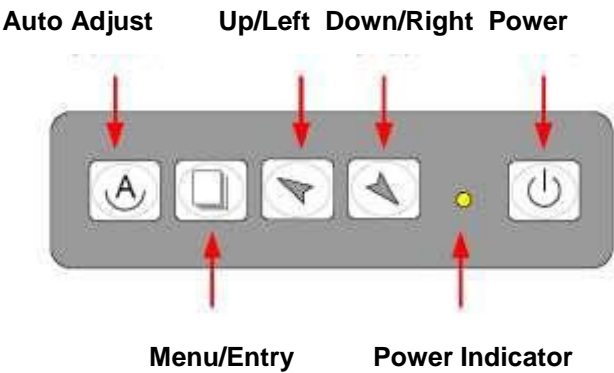
## 1.5 Display Mode


Resolution	H Freq.(kHz)	V Freq.(Hz)	Remark
640x350@70	31.469	70.087	VGA
640x400@70	31.469	70.087	VGA
640x480@66	35.000	66.667	MAC
640x480@72	37.861	72.809	VESA
720x400@70	31.469	75.000	TEXT
800x600@56	35.156	56.250	VESA
800x600@72	48.077	72.188	VESA
832x624@75	49.107	75.087	MAC
848x480@60	31.020	60.000	VESA
1152x864@70	63.850	70.000	VESA
1152x864@75	67.500	75.000	VESA
1152x900@76	71.809	76.149	SUN
1280x960@60	60.000	60.000	VESA
1440x900@60	56.040	60.000	VESA
1440x1050@60	65.320	59.980	VESA
1440x1050@75	82.280	74.870	VESA





**Figure 2.3: Rear View of AcuDis115**

## 2.1 AD Board OSD Functions




 Power switch: To turn ON or OFF the power



 Shift the icon to the right side or shift it up

 Shift the icon to the left side or shift it down



 Menu: To enter OSD menu for related icon and item.

 Auto Button: One-touch auto adjustment





### 1.) Getting into Burn-in Mode

Before setting into a burn-in mode, first disconnect the AC power cord. Then press (don't let them go) the   buttons until the AC power cord is connect of your screen. Now it can be put into the burn-in mode for changing colors.

### 2.) Getting Out of Burn-in Mode














Before getting out of the burn-in mode, please first disconnect the AC power cord. Then press the  button (If not workable, press the  button and don't let them go) until the AC power cord is connected. Please don't let your fingers go until the AC power cord is connected again and the wording of "RGB" appears on the top left corner of your screen, and wait for 3 second. Under the non-signal entry situation, if **Cable Not Connected** is seen, exit is thus successfully made.

## When the Burn-in Mode is Unable to Eradicate...

- 1.) If the “RGB” is still on the top left corner of the screen, press  to enter “Miscellaneous” and choose “Reset”, and then **Yes**, and press . When the screen goes black, disconnect power and repeat the above steps.
- 2.) If the “RGB” is not found, disconnect the AC power cord first. Then press the   buttons (don't let them go) until the AC power cord is connected, and wait for 2 to 3 seconds. When “RGB” appears, repeat the above steps.
- 3.) Functions of OSD Keys

## 2.2 OSD Controls

To make any adjustment, select the following:

1. Press  (Menu) to show the OSD menu or disable the OSD menu.
2. Select the icon that you wish to adjust with the (  /  or +/-) key in the menu.
3. Press  (Menu) and then choose the item with the (  /  or +/-) key.
4. Press  (Menu) and then adjust the quality with the (  /  or +/-) key.
- 4.) If the “RGB” is still on the top left corner of the screen, press  to enter “Miscellaneous” and choose “Reset”, and then **Yes**, and press . When the screen goes black, disconnect power and repeat the above steps.
- 5.) If the “RGB” is not found, disconnect the AC power cord first. Then press the   buttons (don't let them go) until the AC power cord is connected, and wait for 2 to 3 seconds. When “RGB” appears, repeat the above steps.
- 6.) Functions of OSD Keys

## 2.3 OSD Default Parameter

Management		Luminance		Blue	80	Language	English
H. Position	auto	Brightness	70	Red	80	OSD	
V. Position	auto	Contrast	50	Green	80	H. Position	Auto
Pixel Clock	auto	Sharpness	3	Mute	ON	V. Position	Auto
Phase	auto	Color	6500	Volume	50	OSD time	Auto

## 2.4 Main Menu



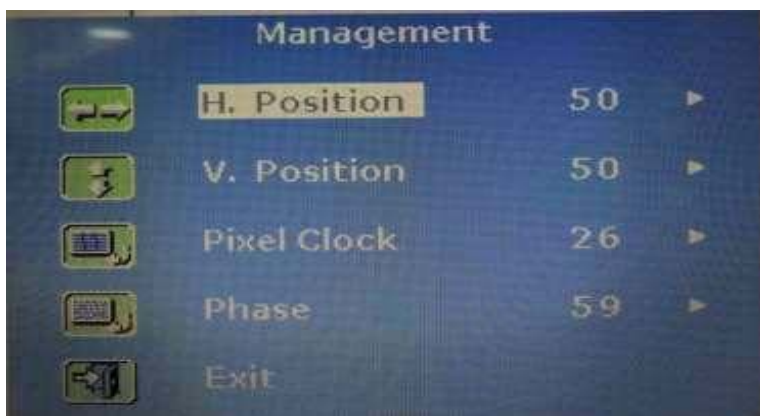
In the **Main menu**, there are the following items:

- Auto Adjust
- Luminance
- Management
- Color
- Volume
- OSD
- Language
- Recall
- Information
- Exit



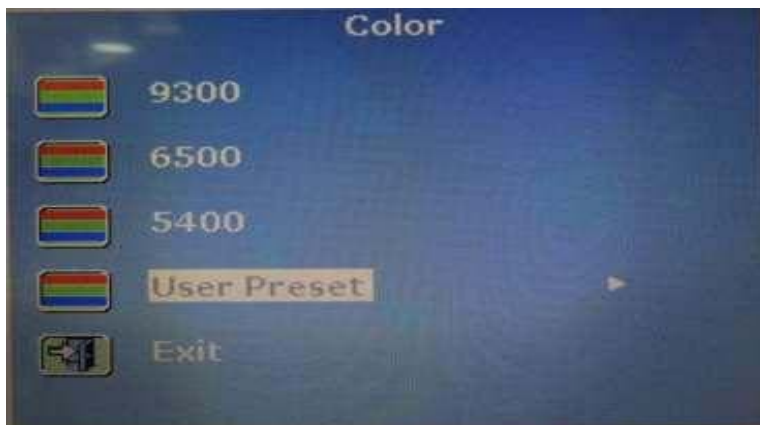
For **Luminance** list, there are the following:

- Brightness
- Contrast
- Sharpness Exit



For **Management** list, there are the following:

- H. Position
- V. Position
- Pixel Clock Phase
- Exit



For **Color** list, there are the following:

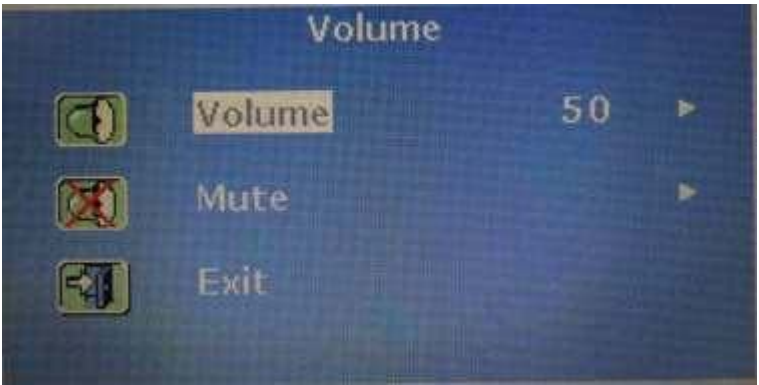
- 9300
- 6500
- 5400
- User Preset
- Exit





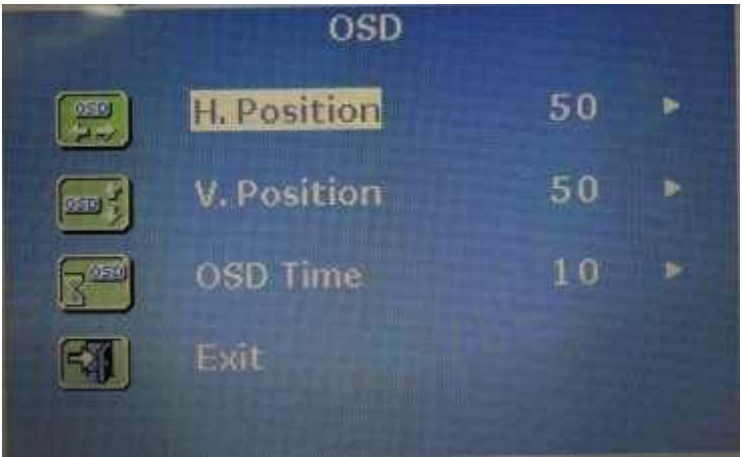
In **User Preset**, there are the following:

- Red
- Green
- Blue
- Exit



For **Volume** list, there are the following:

- Volume
- Mute
- Exit



For **OSD** list, there are the following:

- H. Position
- V. Position
- OSD Time
- Exit



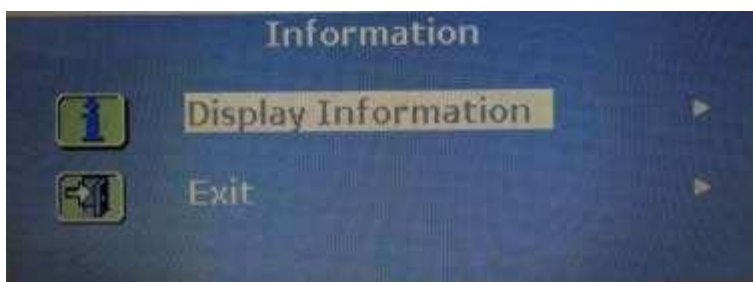
For **Language** list, there are the following:

- English
- Francais
- Deutsch
- Italiano
- Espanol
- 日本語
- 繁體中文
- 简体中文
- Portuguese
- 한국의
- Русский



For **Recall** list, there are the following:

- Recall Color
- Recall All
- Exit



For **Information** list, there are the following:

- Display Information
- Exit

# Chapter 3 \_\_\_\_\_ Installation

## 3.1 Introduction to Touch Screen Controller Board

AcuDis115's touch screen is PenMount 6300 USB control board which is designed for USB interface and specific for 4, 5, 8-wire touch screens. It is designed with USB interface features with multiple devices supporting function. PenMount 6300 control board using PenMount 6000 controller that has been designed for those who may like and all-in-one solution with 10-bit A/D converter built-in to make the total printed circuit board denser, circuit diagram also designed for 12-bit ADC for optional. There are two connectors on this board, one connector is for 4, 5, 8-wire touch screen cable (optional), and another is for 4-pin USB A type cable (optional).

## 3.2 Windows 2000/XP/2003/Vista Universal Driver Installation for PenMount 6000 Series

Before installing the Windows 2000/XP driver software, you must have the Windows 2000/XP system installed and running on your computer. You must also have one of the following PenMount 6000 series controller or control boards installed: PM6500, PM6300.

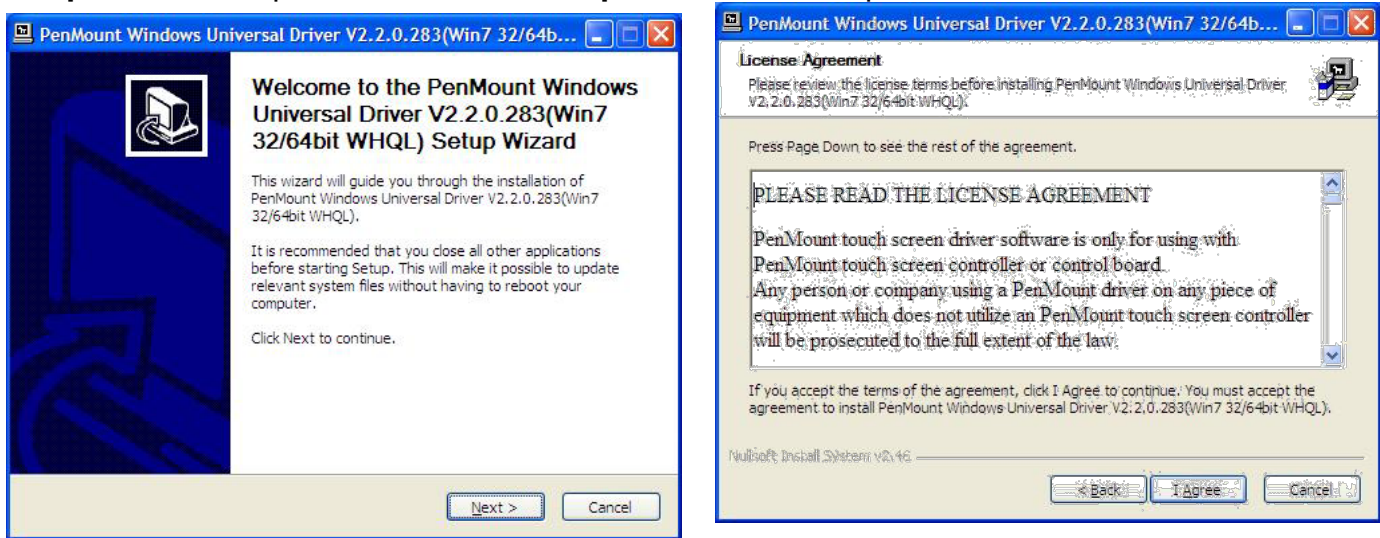
## 3.3 Installing Software

If you have an older version of the PenMount Windows 2000/XP driver installed in your system, please remove it first. Follow the steps below to install the PenMount DMC6000 Windows 2000/XP driver.

**Step 1.** Please make sure your PenMount 6000 device had plugged in advance. If your device uses RS232 interface, please plugged in before the machine is turned on. When the system first detects the controller board, a screen appears that shows "Unknown Device". Do not use this hardware wizard. Press Cancel.

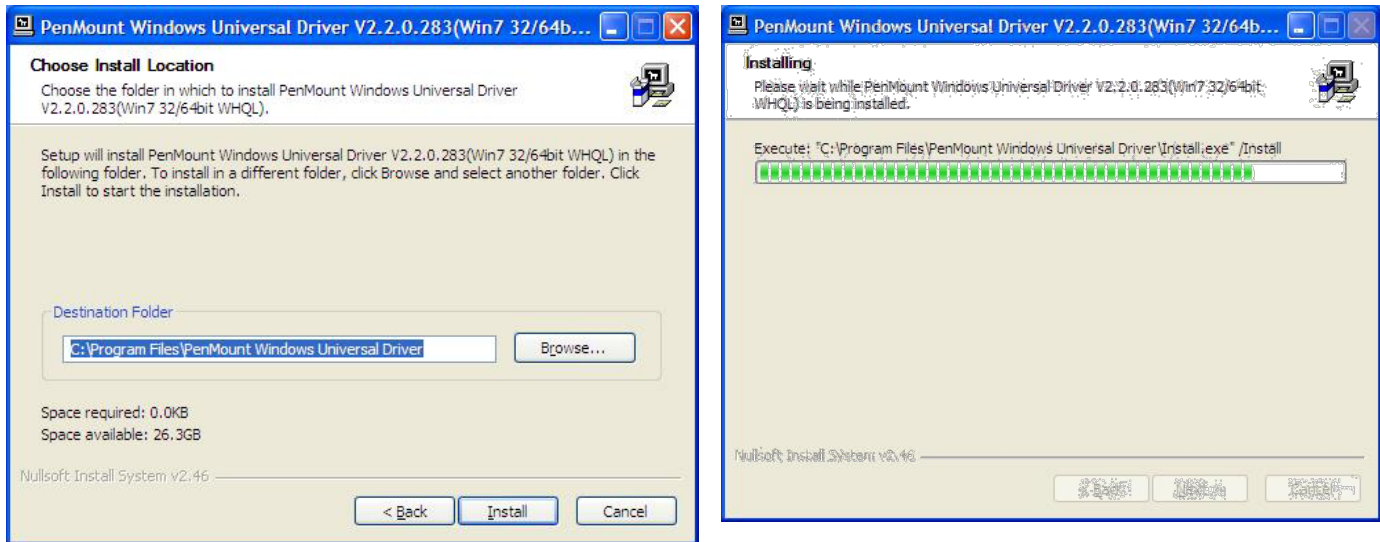


**Step 2.** Insert the product CD install **setup.exe**. Click touch panel driver



**Step 3.** A License Agreement appears. Click **IAgree“...”** and **Next”**

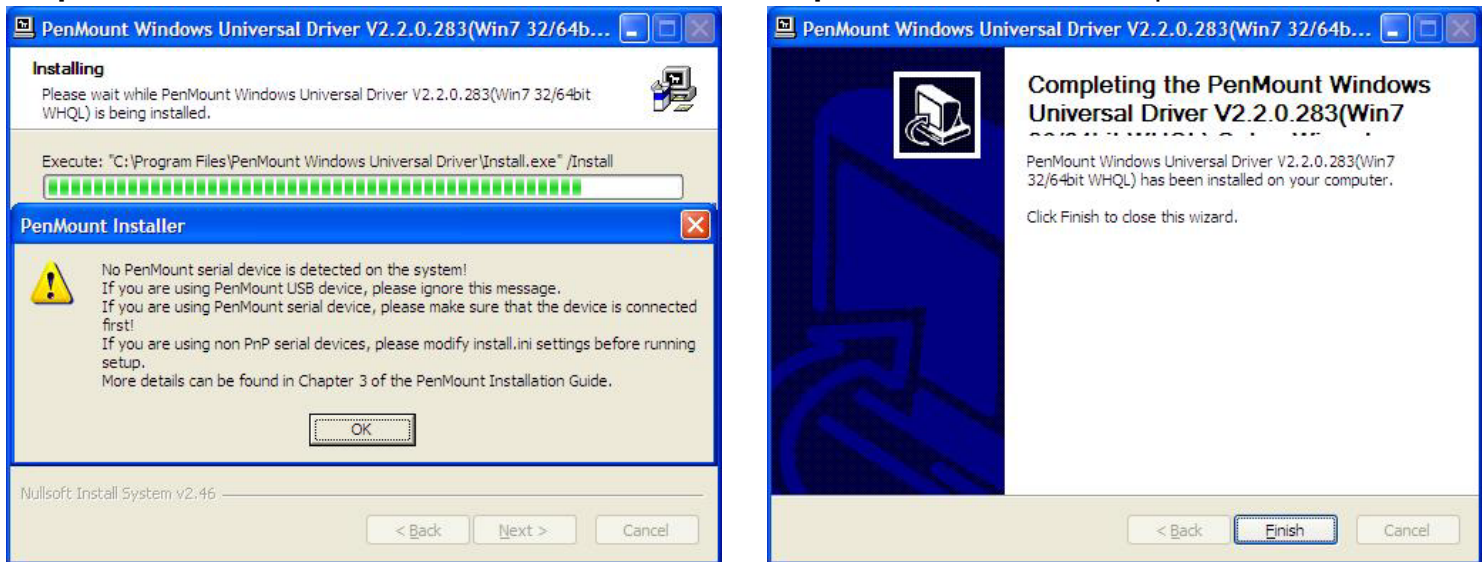
**Step 4.** Choose the folder in which to install PenMount Windows Universal Driver. Click **Install**.



**Step 5.** Wait for installation. Click **Next** to continue.

**Step 6.** Click **OK**.

**Step 7.** Click **Finish** to complete installation.





### 3.4 Software Functions

Upon rebooting, the computer automatically finds the new 6000 controller board. The touch screen is connected but not calibrated. Follow the procedures below to carry out calibration.

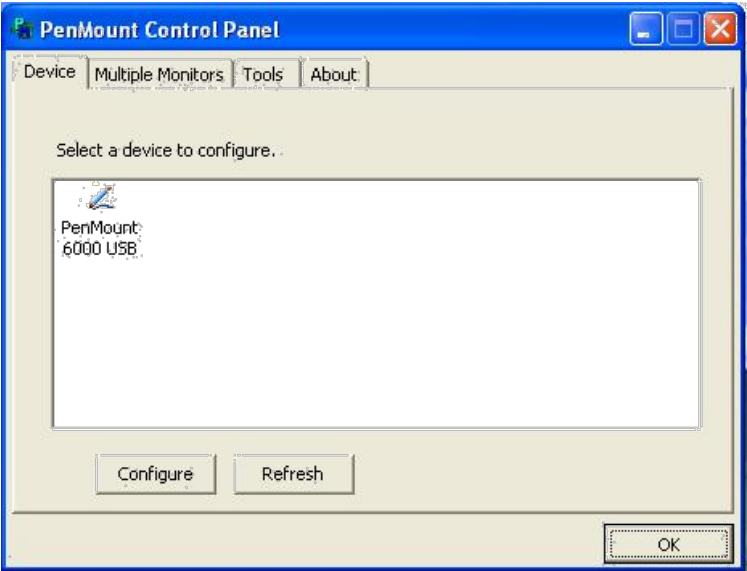
- 1. After installation, click the PenMount Monitor icon “PM” in the menu bar.
- 2. When the PenMount Control Panel appears, select a device to “Calibrate.”

#### PenMount Control Panel

The functions of the PenMount Control Panel are **Device**, **Multiple Monitors**, **Tools** and **About**, which are explained in the following sections.

#### Device

In this window, you can find out that how many devices are detected on your system.



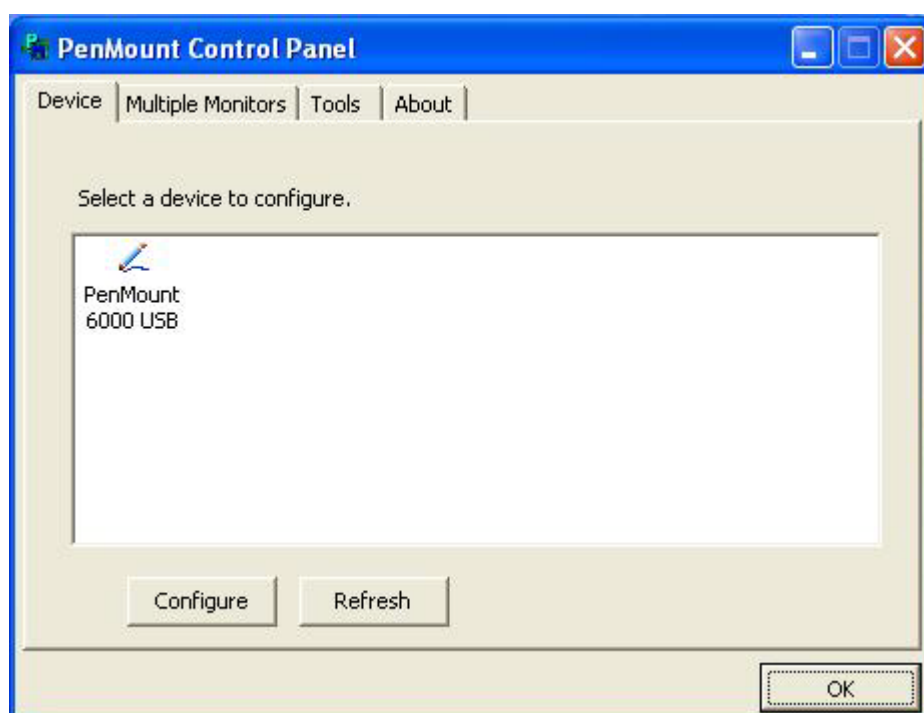
#### Calibrate

This function offers two ways to calibrate your touch screen. ‘Standard Calibration’ adjusts most touch screens. ‘Advanced Calibration’ adjusts aging touch screens.

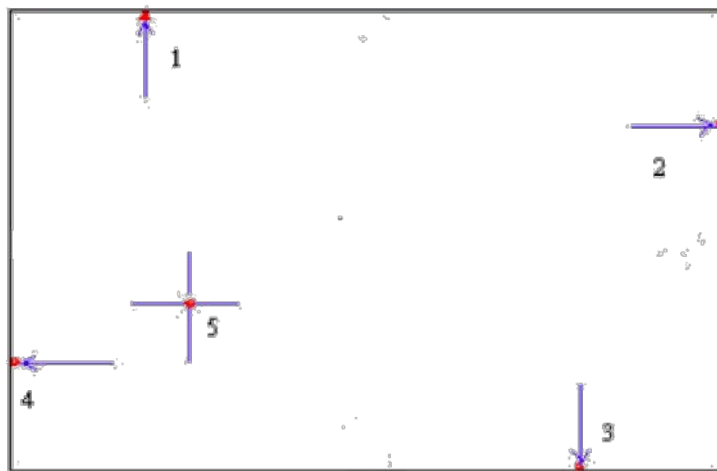
Standard Calibration	Click this button and arrows appear pointing to red squares. Use your finger or stylus to touch the red squares in sequence. After the fifth red point calibration is complete. To skip, press ‘ESC’.
Advanced Calibration	Advanced Calibration uses 4, 9, 16 or 25 points to effectively calibrate touch panel linearity of aged touch screens. Click this button and touch the red squares in sequence with a stylus. To skip, press ESC’.

Command Calibration	<p><b>Command call calibration function. Use command mode call calibration function, this can uses Standard, 4, 9, 16 or 25 points to calibrate</b> E.g. Please run ms-dos prompt or command prompt c:\Program Files\PenMount Universa Driver\Dmcctrl.exe -calibration 0 ( Standard Calibration)</p> <p>Dmcctrl.exe - calibration (\$)</p> <p>0= Standard Calibration</p> <p>4=Advanced Calibration 4</p> <p>9=Advanced Calibration 9</p> <p>16=Advanced Calibration 16</p> <p>25=Advanced Calibration 25</p>
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**Step 1.** Please select a device then click “Configure”. You can also double click the device too.

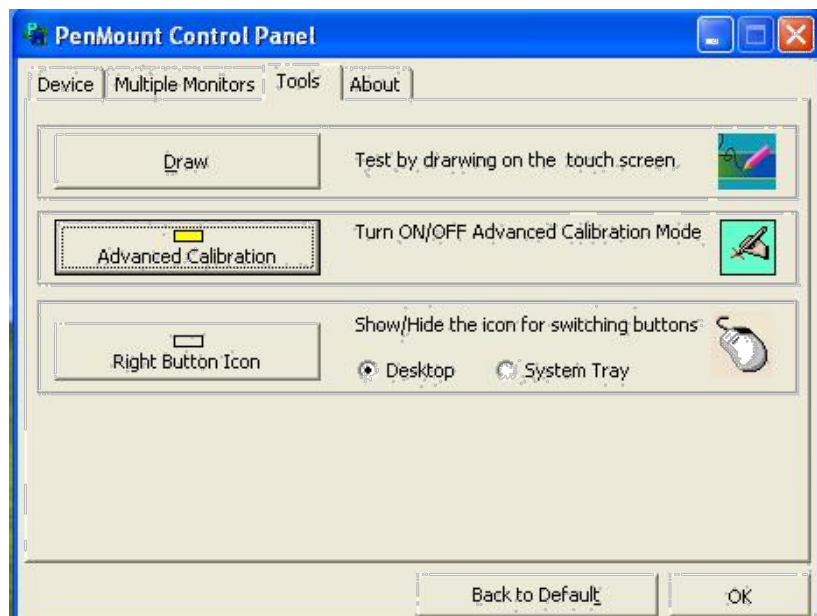


**Step 2.** Click “Standard Calibration” to start calibration procedure

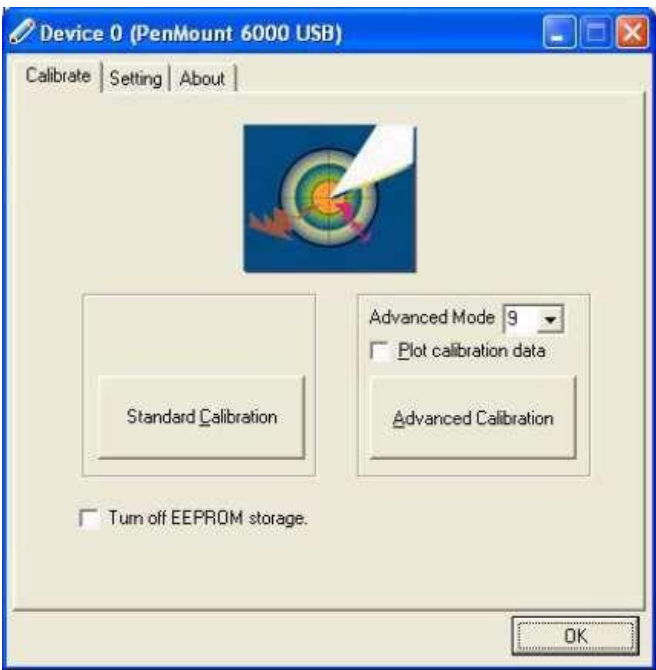


**NOTE:** The older the touch screen, the more Advanced Mode calibration points you need for an accurate calibration. Use a stylus during Advanced Calibration for greater accuracy. Please follow the step as below:

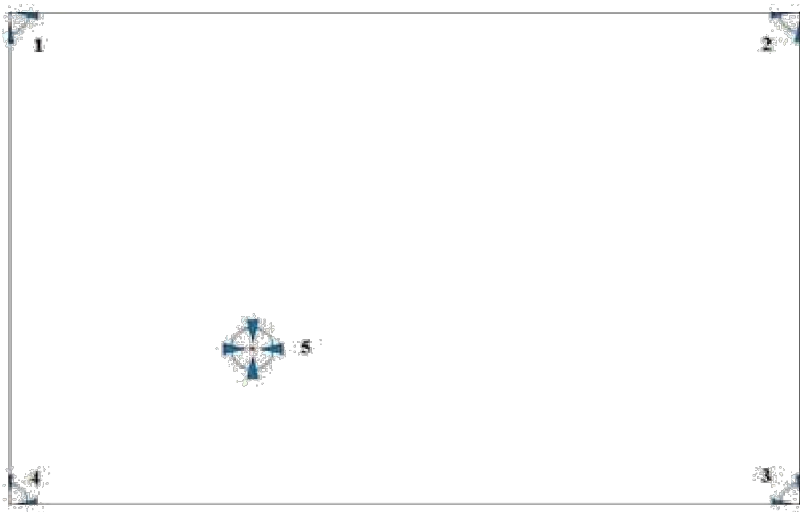
**Step 3.** Come back to “PenMount Control Panel” and select “**Tools**” then Click “**Advanced Calibration**”.



Select **“Device”** to calibrate, then you can start to do “Advanced Calibration”.



**NOTE:** Recommend to use a stylus during Advanced Calibration for greater accuracy.

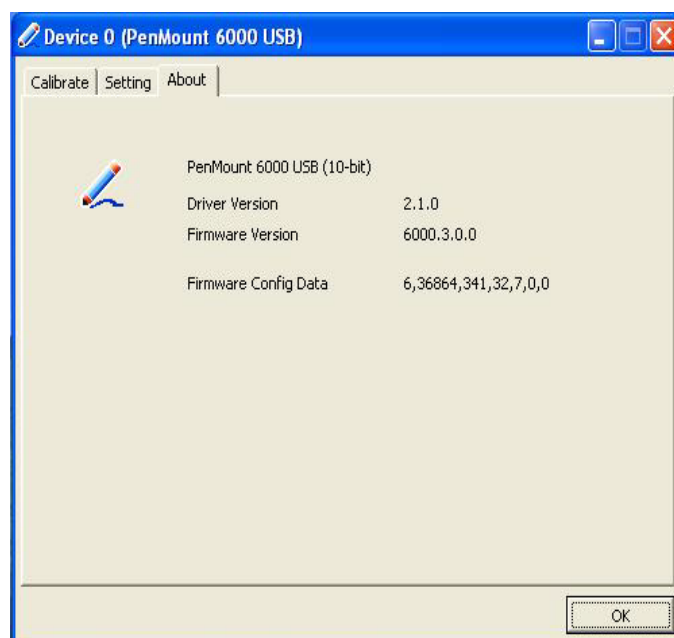
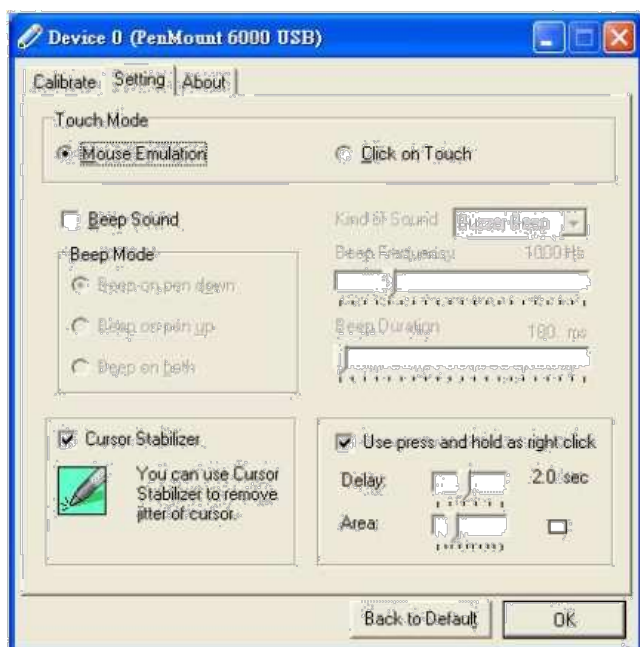


Plot Calibration Data	Check this function and a touch panel linearity comparison graph appears when you have finished Advanced Calibration. The blue lines show linearity before calibration and black lines show linearity after calibration.
Turn off EEPROM storage	The function disable for calibration data to write in Controller. The default setting is Enable



## Setting

Touch Mode	<p>This mode enables and disables the mouse's ability to drag on-screen icons—useful for configuring POS terminals.</p> <p><b>Mouse Emulation</b> – Select this mode and the mouse functions as normal and allows dragging of icons.</p> <p><b>Click on Touch</b> – Select this mode and the mouse only provides a click function, and dragging is disabled</p>
Beep Sound	<p><b>Enable Beep Sound</b> – turns beep function on and off</p> <p><b>Beep on Pen Down</b> – beep occurs when pen comes down</p> <p><b>Beep on Pen Up</b> – beep occurs when pen is lifted up</p> <p><b>Beep on both</b> – beep occurs when comes down and lifted up</p> <p><b>Beep Frequency</b> – modifies sound frequency</p> <p><b>Beep Duration</b> – modifies sound duration</p>
Cursor Stabilizer	Enable the function support to prevent cursor shake.
Use press and hold as right click	You can set the time out and area for you need



## About

This panel displays information about the PenMount controller and driver version.

## Multiple Monitors

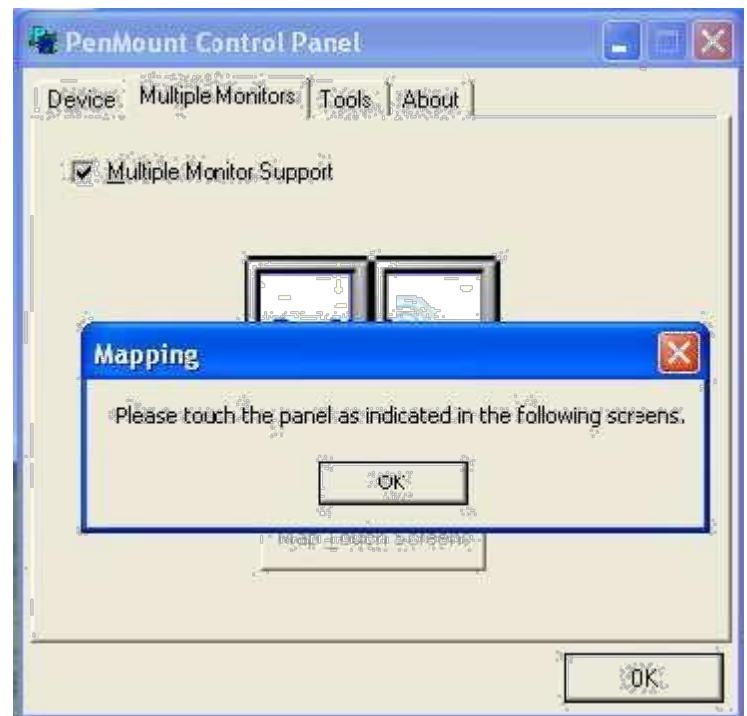
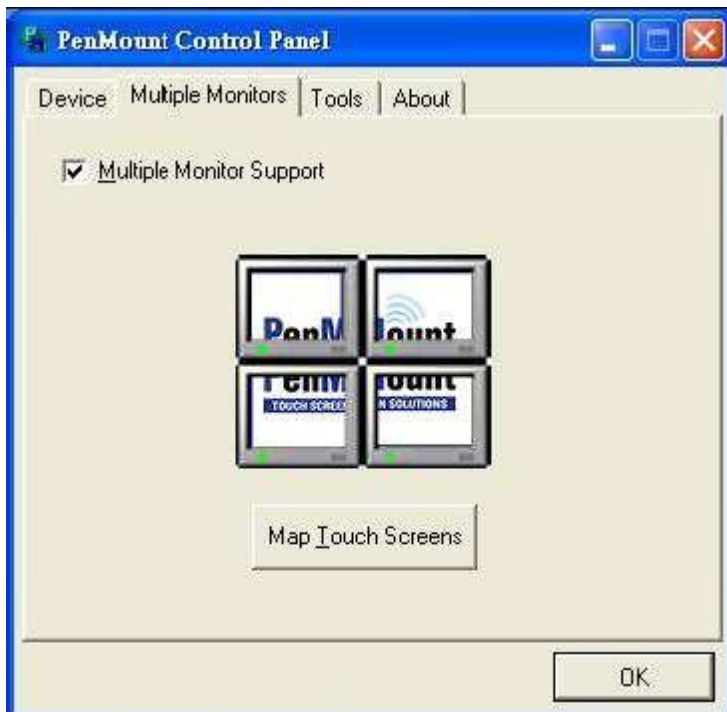
Multiple Monitors supports from two to six touch screen displays for one system. The PenMount drivers for Windows 2000/XP support Multiple Monitors. This function supports from two to six touch screen displays for one system. Each monitor requires its own PenMount touch screen control board, either installed inside the display or in a central unit. The PenMount control boards must be connected to the computer COM ports via the RS-232 interface. Driver installation procedures are the same as for a single monitor. Multiple Monitors supports the following modes:

- Windows Extend Monitor Function
- Matrox DualHead Multi-Screen Function
- nVidia nView Function

**NOTE:** The Multiple Monitors function is for use with multiple displays only. Do not use this function if you have only one touch screen display. Please note once you turn on this function the Rotating function is disabled.

**Enable the multiple display function as follows:**

**Step 1.** Check the **Multiple Monitor Support** box; then click **Map Touch Screens** to assign touch controllers to displays.



**Step 2.** When the mapping screen message appears, click “OK”

**Step 3.** Touch each screen as it displays **Please touch this monitor** Following.this **Pr** sequence and touching each screen is called **mapping the touch screens**.



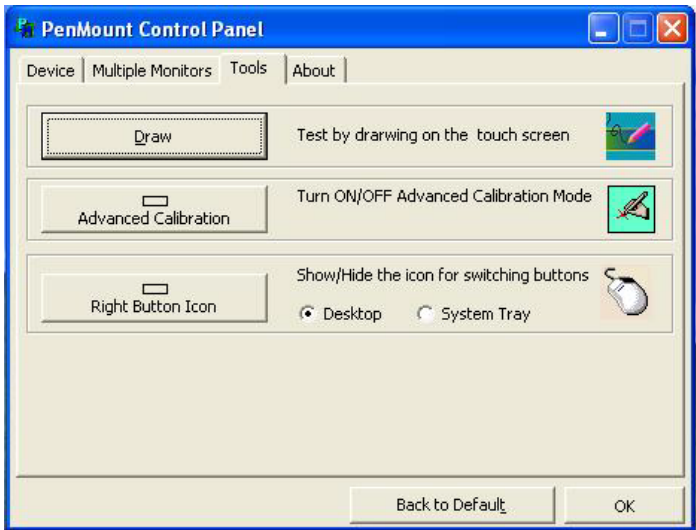
**Step 4.** After the setting procedure is finished, maybe you need to calibrate for each panel and controller

**NOTES:**

1. If you used a single VGA output for multiple monitors, please do not use the **Multiple Monitors** function. Just follow the regular procedure for calibration on each of your desktop monitors.
2. The Rotating function is disabled if you use the Multiple Monitors function.
3. If you change the resolution of display or screen address, you have to redo **Map Touch Screens** so the system understands where the displays are.
4. If you more monitor mapping one touch screen, **Please press ‘S’ to skip**

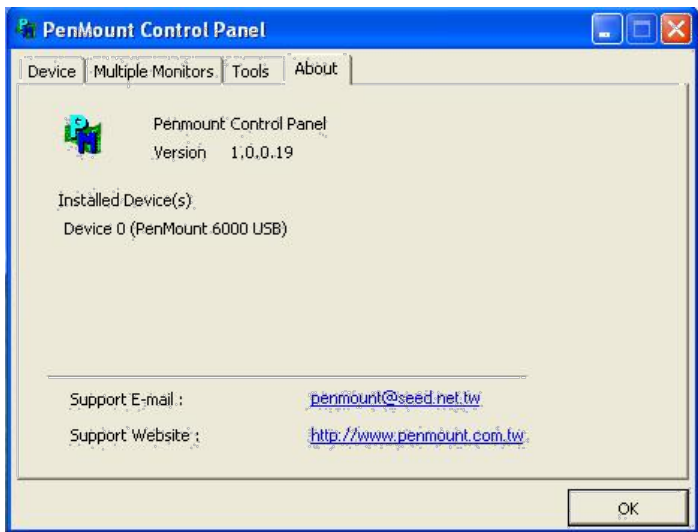
**Tools**

Draw	<b>Tests or demonstrates the PenMount touch screen operation.</b>
Advanced Calibration	<b>Enable Advanced Calibration function</b>
Right Button Icon	<b>Enable right button function. The icon can show on Desktop or System Tray (menu bar).</b>



**About**

You can see how many devices of PenMount controller that are plugged to your system




## PenMount Monitor Menu Icon

The PenMount monitor icon (PM) appears in the menu bar of Windows 2000/XP system when you turn on PenMount Monitor in PenMount Utilities.



PenMount Monitor has the following function



Control Panel	Open Control Panel Windows
Beep	Setting Beep function for each device
Right Button	When you select this function, a mouse icon appears in the right-bottom of the screen. Click this icon to switch between Right and Left Button functions. 
Exit	Exits the PenMount Monitor function.

## PenMount Rotating Functions

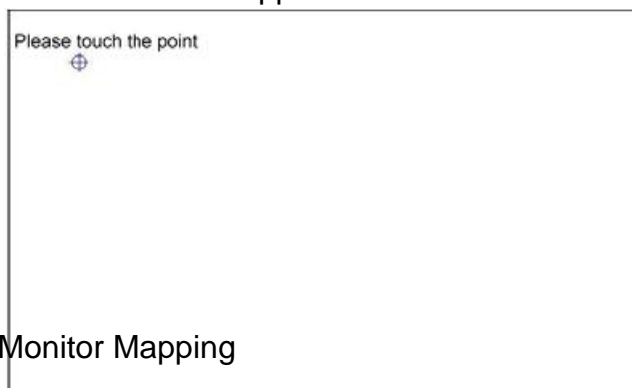
The PenMount driver for Windows 2000/XP supports several display rotating software packages.

Windows Me/2000/XP support display rotating software packages such as:

- Portrait's Pivot Screen Rotation Software
- ATI Display Driver Rotate Function
- nVidia Display Driver Rotate Function
- SMI Display Driver Rotate Function
- Intel 845G/GE Display Driver Rotate Function

## Configuring the Rotate Function

1. Install the rotation software package.
2. Choose the rotate function (0°, 90°, 180°, 270°) in the 3rd party software. The calibration screen appears automatically. Touch this point and rotation is mapped.



**NOTE:** The Rotate function is disabled if you use Monitor Mapping



With the unique set of products, Acura Embedded Systems remains committed to its goal of providing trouble-free and customer-friendly service. A special customer service unit has been set up specifically to cater to our esteemed customers' needs.

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